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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,421	10/23/2003	Mark C. Caron	D1815-00099	8376
8933	7590	03/28/2005	EXAMINER	
DUANE MORRIS, LLP			DAVIS, ROBERT B	
IP DEPARTMENT			ART UNIT	
ONE LIBERTY PLACE			PAPER NUMBER	
PHILADELPHIA, PA 19103-7396			1722	

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/692,421

Applicant(s)

CARON, MARK C.

Examiner

Robert B. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 21-27 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-20 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 14 and 31-33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/23/03, 4/26/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Applicant's election with traverse of Group I, claims 1-20 and 28-33, in the reply filed on January 27, 2005 is acknowledged. The traversal is on the ground(s) that the restriction mischaracterizes the subject matter of Group II. The restriction requirement is corrected as requested.

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-20 and 28-33, drawn to a vacuum bag, classified in class 425, subclass 389.
- II. Claims 21-27 and 34, drawn to a method of molding using a vacuum bag, classified in class 264, subclass 571.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to debulk dry glass or carbon fibers against a mold. Claim 34 requires molding of a polymeric material.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. In the response of January 27, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-20 and 28-33. Affirmation of

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this election must be made by applicant in replying to this Office action. Claims 21-27 and 34 are hereby withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Double Patenting***

6. Applicant is advised that should claim 7 be found allowable, claim 20 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 4-8, 11, 15, 20 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Pagliaro (4,702,376: figures 1 and 2; and column 2, lines 15-63).

Pagliaro teaches a vacuum bag comprising a silicone rubber or a fluoroelastomer (10) bound to a woven or knitted fabric layer (12) including polyaramid fibers. The reference states that if a silicone elastomer is used the fabric is coated with a silicone rubber which provides a good release finish to the exposed surface of the fabric. The

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exposed surface of the fabric provides a textured surface with air passageways when the surface is brought against a facing surface of an article during vacuum bagging. In regards to claims 7 and 20, Pagliaro shows layers (30 and 32) of the bag material (10) connected to form a double layer bag.

9. Claims 1-5 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Brozovic et al (4,681,651: figures 1-2; column 3, lines 43-54 and column 4, lines 11-28).

Brozovic et al teach a vacuum bag having a fiberglass fabric (20) attached to the bag and a Teflon (RTM) release layer coating on the fiberglass fabric. Teflon is well known as the registered trademark that encompasses PTFE among other resins.

10. Claims 1, 2, 4, 5, 12, 13, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Callis et al (4,842,670: figures 3A-3D, 5 and 6).

Callis et al teach a vacuum bag (116) having a fiberglass fabric layer (132) sandwiched between layers of silicone rubber. The bag is dimensioned to a mold surface and seals flat along the edges of the bag to a molding tool.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 9, 10, 17, 18 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pagliaro taken together with Seemann (5,316,462: figures 1-4, column 5, lines 20-65).

Pagliaro discloses all claimed features except for the use of a network of veins to distribute resin, the bag being translucent or a resin distribution channel.

Seemann discloses a vacuum bag for resin transfer molding comprising a silicone material having fibrous reinforcement as the bag material. The bag has a plurality of bumps (16) and flow conduits (10) to distribute resin along the surface of the bag. The bag is also translucent to allow operator monitoring during molding.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the vacuum bag of Pagliaro by incorporating bumps and feed channels in the vacuum bag for the purpose of allowing resin to be distributed along the inner surface of the bag. It would have been further obvious to modify the bag by making it of a translucent material as disclosed by Seemann for the purpose of allowing operator monitoring during molding.

13. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pagliaro taken together with Hooper (5,576,030: figure 1).

Pagliaro discloses all claimed features except for a vacuum exhaust port extending through the bag.

Hooper discloses a vacuum valve (46) extending through a vacuum bag (37).

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of Pagliaro by having a vacuum valve extending through a vacuum bag as disclosed by Hooper for the purpose of allowing the vacuum to be removed for proper molding within the bag.

***Allowable Subject Matter***

14. Claims 14 and 31-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter: In regards to claim 14, none of the prior art of record teach or suggest a bag as recited in claim 1 wherein the fabric contains both flexible and semi-rigid portions. In regards to claim 31, none of the prior art of record teach or suggest a reusable vacuum bag having a fabric layer reinforced with high strength reinforcing fibers, and the fabric layer being coated on each side with a non-stick fluorocarbon-based release layer bonded thereto.

***Conclusion***


16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The remaining references show the state of the art of vacuum bagging assemblies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert B. Davis whose telephone number is 571-272-1129. The examiner can normally be reached on Monday-Friday 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin L. Utech can be reached on 571-272-1137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert B. Davis  
Primary Examiner  
Art Unit 1722

3/20/05